

# PATENT ABSTRACTS OF JAPAN

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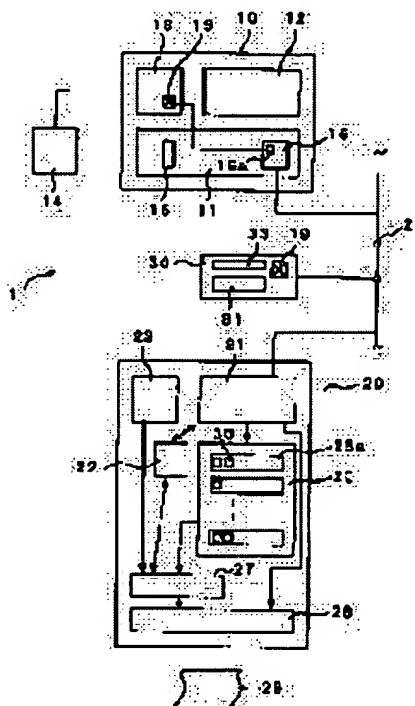
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(21)Application number : 10-347362 (71)Applicant : SEIKO EPSON CORP

(22)Date of filing : 07.12.1998 (72)Inventor : SHIMA TOSHIHIRO

(54) PRINTER AND ITS CONTROL METHOD, PRINTER DRIVER, PRINT SYSTEM, CONTROL METHOD FOR INFORMATION PROCESSOR, AND RECORDING MEDIUM



(57)Abstract:

PROBLEM TO BE SOLVED: To provide a printer which can safely and securely print individual information.

SOLUTION: The printer 20 has a fingerprint recognition system 23 which can recognize a fingerprint and a job file 20 having fingerprint information 19 in a queue 25 is stored in a user section 25a. A print part 27 prints print data 31 of the job file 30 stored in the user section 25a according to the fingerprint information obtained from the fingerprint recognition system 23.

Relating to this printer 20, information which is not desired to be open to others can be related to the fingerprint information in relation to user individuals of individual information, etc., and the fingerprint information when obtained can be printed, so the individual information, etc., can securely be printed. Further, output for individuals can securely be performed without

providing any accessories such as output boxes for the individuals.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to an airline printer, its control approach, and a printer driver.

[0002]

[Description of the Prior Art] The system outputted by the printer which created the document and was shared on the personal computer is common. Since an individual document or the document which indicated contents to hold as secret is outputted using this printing system, there is also a system equipped with the personal output box equipped with the lock device.

[0003]

[Problem(s) to be Solved by the Invention] The contents which a personal computer is used in various scenes, such as works or not only office but in the car [ a home, in the car, etc. ], and are outputted by the printer in connection with it are also various. Exchange of e-mail etc. follows on prospering via the Internet, processing the document or data especially applied to individual humanity news with a personal computer is increasing, and a printer also needs to correspond to such a situation.

[0004] It is one of the solution approaches to prepare the output box which can be opened and closed with a key or a password. However, if the number of users which shares a printer increases, installation area will become large, and since the costs which prepare an output box also increase, it cannot be said to be the desirable solution approach. Moreover, since it is usually automatically discharged by the output box and an output box understands the existence of a document, the secret of the contents of an output may be unable to be held completely.

[0005] On the other hand, the printing system which forms a keyboard in a printer and enables the input of a password is effective. By entering a password, a user can be identified and it can also be recognized that the user who entered the corresponding password further exists near the printer. For this reason, it can output only by outputting the information relevant to a password, without exhibiting individual humanity news. Therefore, the big system of the scale of an output box etc. can be unnecessary, and its extent which the printer simple substance or the keyboard accompanied can be simple, and it can output individual humanity news to insurance by the system of low cost.

[0006] However, the password which is hard to steal in order to secure security level, i.e., the password which is hard to memorize, is needed, and, in addition to the activity which registers a password, the system using a password requires modification of a periodical password further. Therefore, it will become the system which is going to hold high safety and which is hard to use.

[0007] Then, it aims at offering the airline printer which is easy to use and can fully aim at protection of individual humanity news with a simple configuration, and its control approach in this invention. Moreover, it aims at offering the printer driver relevant to it etc.

[0008]

[Means for Solving the Problem] For this reason, in this invention, it is made to

identify an individual using fingerprint information instead of a password. That is, the airline printer of this invention reads a fingerprint and is characterized by having a fingerprint recognition means by which each fingerprint can be recognized, and the printing means which can print the information beforehand related with the fingerprint information acquired from this fingerprint recognition means. Moreover, the control approach of the airline printer of this invention is the control approach of an airline printer of reading a fingerprint and having the fingerprint recognizing ability which can recognize each fingerprint, and is characterized by having the process which acquires fingerprint information according to a fingerprint recognition device, and the presswork which prints the fingerprint information and the information associated beforehand.

[0009] An individual can be attested nearly completely by judging a fingerprint. Though recent-years and fingerprint recognition or a fingerprint authentication system is still compacter, what has a good precision is developed, and the employable system has also appeared instead of the password which logs in to a network through a personal computer. Therefore, by carrying such a fingerprint recognition means, the airline printer which can ensure discernment of an individual can be realized with a simple configuration, and it can provide by low cost. Moreover, since a user memorizes a complicated password or the time and effort which updates it periodically is lost by adopting a fingerprint as individual authentication information, a very user-friendly airline printer can be offered.

[0010] By the airline printer and the control approach of this invention, the information relevant to it is printed by making a fingerprint read. For this reason, it turns out that there is a user with that fingerprint near the airline printer, and it turns out that outputting the information relevant to a fingerprint was further permitted by the user. Therefore, it can output only by outputting the information related with the recognized fingerprint information, without opening a user's individual humanity news to external human being, and is not opened to the public outside in the condition of having been contrary to the intention of a user. For this reason, a user's secret can be held even if it does not adopt an expensive system like the output box equipped with the lock device intricately and greatly. Furthermore, since a user does not need to memorize a fingerprint, it does not become a user's burden, either. Therefore, by this invention, it is easy to use and the airline printer which can secure the safety of individual humanity news on high level can be offered further.

[0011] Furthermore, fingerprints not only differ for every user, but change with each fingers. Therefore, about ten kinds of different processings can be made to carry out to an airline printer only by making a fingerprint read. A user should just memorize which finger supports which processing. Therefore, the airline printer equipped with the user interface which is very easy, and is easy to memorize, and is easy to use by this invention can be offered. For example, the thing of making the class of document to print correspond to a finger, or making printing number of sheets correspond to a finger etc. is possible. Moreover, if the sequence of making a fingerprint reading is patternized and being matched with processing, it is also possible to direct almost all processings of an airline printer with a fingerprint.

[0012] Moreover, not only the output of the print data containing individual humanity news but the thing used since the information for which it wishes individually is outputted is possible for the airline printer of this invention. That is, there is a system which is not concerned with the ability to lock but enables it to prevent derangement by outputting to a different tray for every output destination change in the airline printer shared. If it is the airline printer of this invention, hold the contents of an output (print data) to the storage region of the airline printer itself or the exterior, a fingerprint is made to read, and the information relevant to it can be printed. For this reason, if it is the airline printer of this invention, even if it does not prepare the tray for every output destination change, it can print out for every user. Moreover, the fingerprint information of authorized human beings, such as a service staff, is memorized, and if the fingerprint information is recognized, the information on special applications, such as a maintenance status sheet, can be outputted.

[0013] On the specifications of this invention, some the means or approaches of associating fingerprint information and print data are proposed. One of them relates print data with fingerprint information soon. That is, the job file which accumulated print data and was equipped with print data in the file are recording means or file are recording process which can be supplied to a printing means or presswork can be accumulated in the condition that fingerprint information accompanies. The easiest approach is also including fingerprint information in a job file. Of course, fingerprint information may be offered by other files matched with the job file. If it is this configuration, even if it has not registered fingerprint information into an airline printer beforehand, the existence of the data which should only only be printed [ whether there is any information relevant to the read fingerprint and ] can be judged.

[0014] The print data associated fingerprint information and directly read a fingerprint, and can provide an airline printer with it in information processors, such as a personal computer which has the data origination function which creates the fingerprint recognizing ability which can recognize each fingerprint, and the data for printing, by relating with the data for printing the fingerprint information acquired by fingerprint recognizing ability, carrying out it, and performing the output process in which an output is possible. Such a function reads a fingerprint and can offer the fingerprint information acquired from the fingerprint recognition equipment which can recognize each fingerprint in the condition of having been recorded on the suitable record medium as a printer driver which has the output means in which an output is possible in relation to the data for printing. Of course, a computer network is also included in a record medium.

[0015] Moreover, the data for printing and the fingerprint information acquired from fingerprint recognition equipment are associated, and the data for printing can be outputted with the airline printer of this invention by recording on a computer at a record medium in the condition which can be read. The record medium could be built in the airline printer and may be an outboard recorder. Of course, the recording device connected through the computer network is also included. In order to associate and carry out the data for printing, and fingerprint

information most simply, it is including the data and fingerprint information for printing in a job file.

[0016] It relates with the data for printing beforehand, and you may make it input the fingerprint information to carry out from fingerprint recognition equipment for every job file. Moreover, you may be the effective fingerprint information in the job. With the effective fingerprint information in a job, there is fingerprint information used since it logged in to a network or a computer.

[0017] Instead of relating print data with fingerprint information soon, and carrying out them, fingerprint information is beforehand registered into the airline printer, and it is also possible to relate with fingerprint information indirectly and to carry out. The one approach is an approach of preparing the suitable identification information for a job file, and establishing the means which associates and carries out the identification information and fingerprint information. If the job file which contained identification information, for example, a user name etc., when it was this approach is accumulated, it is discriminable using fingerprint information.

[0018] Moreover, it is also possible to prepare the partition beforehand related with fingerprint information by the file are recording means, and to accumulate a job file in the partition. If it is this approach, processing (confidential print) which used the partition related with fingerprint information like a mail box can be performed. Furthermore, in this processing, if it is a job file including a transmitting person's fingerprint information, a transmitting person can also be attested from that fingerprint information. Moreover, it is also possible to set up as a download partition of the information which doubled this partition with liking of a user, and the airline printer equipped with the function which collates with a fingerprint the information acquired from the Internet etc., and outputs it can be offered.

[0019] Furthermore, some processings are realizable using the airline printer and its control approach of this invention. By establishing an identifiable means, fingerprint information and the information which is not associated print immediately fingerprint information and the information which is not associated, and processing in which it accumulates is possible for fingerprint information and the information associated. That is, fingerprint information and the information which is not associated can be printed on different conditions from the information related with said fingerprint information.

[0020] Moreover, when the fingerprint information which is not registered in fingerprint information when the means which can be registered beforehand is established has been recognized, you may make it print the information related with the fingerprint information which is not registered, for example, an operation manual etc.

[0021] Thus, in the printing system connected with a means by which the airline printer of this invention, an information processor, and the print data related with fingerprint information in between these can be transmitted, it can process to certainty and insurance, without opening confidential information or other individual humanity news to the 3rd person by dealing with fingerprint information as common authentication information. Although the handling of the fingerprint

information suitable for an airline printer is partly indicated in this specification, as a high system of security, it is desirable to input fingerprint information each time. And it is as having mentioned above that it is the information which it does not become a user's burden even if it makes fingerprint information input each time, and a mistake cannot generate easily. Moreover, if it carries out as [ input / fingerprint information / newly ] in case it is used, since it is not necessary to save the information with an airline printer, there is also little effect of the capacity on auxiliary storage units, such as NVRAM.

[0022] On the other hand, it can be used by carrying out user registration of the fingerprint information not only the reason of management of fingerprint information of print data but for other user managements. For example, with reference to fingerprint information, the operating condition of an airline printer is totaled by the user unit, and it becomes possible to carry out accounting etc.

[0023]

[Embodiment of the Invention] This invention is explained further, referring to a drawing below. The outline of the printing system using the printer applied to this invention at drawing 1 is shown. The printing system 1 of this example has the personal computer (it sets henceforth and is a personal computer) 10 and the printer 20 connected with this personal computer 10 by LAN2. Application software, such as the word processor (it sets henceforth and is a word processor) 12 into which a personal computer 10 can input alphabetic data etc. under control of OS11, works. In the personal computer 10 of this example, the fingerprint recognition system 13 works as one of the application software. For this reason, the fingerprint reader 14 as one of the input units which can read the fingerprint of the carried finger is added to the personal computer 10.

[0024] In the personal computer 10 of this example, since fingerprint authentication logs in to the predetermined computer network connected by LAN2, it is an authentication procedure. When putting a personal computer 10 into operation, the fingerprint recognition system 13 analyzes the fingerprint of the finger carried on the fingerprint reader 14, and the fingerprint information 19 acquired as a result is collated in the user registration section 15 of OS11. And when it agrees with a registered user's fingerprint information, a network logs on to a personal computer 10.

[0025] In the printing system 1 of this example, the fingerprint information 19 read at the time of a log on is used as a user's identification information, while the personal computer 10 is working. For this reason, when it is going to print the information inputted with the word processor 12 by the printer 20, the printer driver 16 installed in the personal computer 10 starts, and fingerprint information acquisition section 16a acquires the effective fingerprint information 19 with the fingerprint recognition system 13. And this fingerprint information 19 is included and transmitted to a job file 30 with print data 31. For this reason, in addition to the conventional job control data 33 and print data 31, the job file 30 supplied to a printer 20 from a personal computer 10 via LAN2 is equipped with the fingerprint information 19.

[0026] The fingerprint information 19 should just be data which can identify a fingerprint. Therefore, although the image data itself which copied the fingerprint

is sufficient, in image data, there is much amount of data, and it memorizes and transmits it, and processing using a still more nearly registered fingerprint and a suitable algorithm, and collating takes time amount. For this reason, the information which performed processing which followed the suitable algorithm to the fingerprint read by the fingerprint reader 14, and extracted the description is used.

[0027] The focus (the endpoint and the branch point of a crest) which is not the image data itself and is contained in the pattern of a fingerprint, or correlation between the focus is extracted and used for the fingerprint information which extracted the description. Therefore, although the fingerprint information 19 can identify each fingerprint and it is equipped with sufficient amount of information, the amount of information itself becomes small enough as compared with image data. For this reason, if it is the failure of traffic even if it does not increase the capacity of a job file sharply even if stored in a job file 30, and it transmits and receives via LAN2, there is nothing. Moreover, even if it accumulates the job file 30 including this fingerprint information 19 in the are recording partition (it sets henceforth and is a queue) 25 set as storage, such as a hard disk of a printer 20, it does not have big effect on the capacity of a queue.

[0028] The printer 20 of the printing system 1 of this example receives such a job file 30 via LAN2, and prints and outputs the print data 31 contained in it to the predetermined print form 29. For this reason, it has the receive section 21 which receives a job file 30, the catalogued file 22 into which a user's fingerprint information was registered, the fingerprint recognition system 23 equipped also with the function as a fingerprint reader, a queue 25, and the printing section 27 that outputs the print data of the job file 30 which is in a queue 25 based on the fingerprint information acquired from the fingerprint recognition system 23 to a print station 28.

[0029] The receive section 21 has the function to judge whether the fingerprint information 19 is first included in the job file 30 which received, and if the fingerprint information 19 is not included in a job file 30, it will transmit the job file 30 to the output queue of a print station 28 immediately. Consequently, the contents of the job file 30 in which fingerprint information is not included will be immediately outputted, if a print station 28 is vacant.

[0030] The receive section 21 also has the function which collates with a registered user's fingerprint information further the fingerprint information 19 included in the job file 30 with reference to the fingerprint catalogued file 22. If the fingerprint information 19 included in the job file 30 belongs to a registered user, it will accumulate in corresponding user partition (personal queue) 25a which was prepared for the queue 25. On the other hand, when there is no fingerprint information applicable to the fingerprint catalogued file 22, fingerprint information is registered into the fingerprint catalogued file 22 as a new user, further, a user partition is newly established in a queue 25, and a job file is accumulated in it.

[0031] The fingerprint recognition system 23 extracts fingerprint information from the fingerprint read with the same algorithm as the fingerprint recognition system 13 carried in the personal computer 10 mentioned above. Therefore, if the same user puts the same finger on the fingerprint recognition system 23 of a printer 20,

the fingerprint information acquired with the personal computer 10 and fingerprint information with identity will be acquired. Then, the printing section 27 sends and prints the print data of the job file 30 accumulated in user partition 25a to which a queue 25 corresponds to a print station 28, when collating the fingerprint information acquired from the fingerprint recognition system 23 with a user's fingerprint information registered into the catalogued file 22 and agreeing with a user's registered fingerprint information.

[0032] The flow chart has shown the outline of the processing in the printing system 1 of this example to drawing 2 thru/or drawing 4 . It explains further, referring to these flow charts henceforth. Drawing 2 is the outline of the processing in a personal computer 10, and inputs alphabetic data etc. first using a word processor 12 at step 51. Selection of the processing which prints the alphabetic character inputted at step 52 starts a printer driver 16. A printer driver 16 checks first whether the network log in is carried out at step 53. When it logs in, the fingerprint information used for the log in is dealt with noting that it is a user's effective fingerprint information 19.

[0033] On the other hand, when it does not log in, it checks whether fingerprint information acquisition section 16a of a printer driver expresses a suitable screen as step 54, and authentication is needed for print data. When authentication is required, the fingerprint recognition system 13 is started at step 55, a user's fingerprint is read, and fingerprint information is acquired. The fingerprint information 19 used for the fingerprint information or the log in acquired at step 55 is included in a job file 30 with print data 31 at step 56, and is transmitted to a printer 20 at step 57. When authentication is judged to be unnecessary at step 54, processing which acquires fingerprint information is not performed but a job file 30 is transmitted to a printer 20 in the condition that fingerprint information is not included.

[0034] Even when the effective fingerprint information in a job exists by log in ending, the processing which asks for the fingerprint input of step 55 may be made to be performed whenever it performs printing processing. The print data which need authentication, and the print data which do not need authentication can be divided intentionally by this, and it can transmit to a printer 20. Moreover, when you need authentication, it is also possible to save the time and effort which starts a fingerprint recognition system one by one as the fingerprint information used for the log in as a default is stored in a job file 30.

[0035] Processing when a printer 20 receives a job file 30 to drawing 3 is shown. The receive section 21 of a printer 20 will check the existence of the fingerprint information 19 first at step 61, if a job file 30 is received. If the fingerprint information 19 is not included, a job file 30 is sent and printed by the output queue of a print station 28 at step 65. On the other hand, when the fingerprint information 19 is included in the job file 30, it is checked at step 62 whether it is registered, and when having not registered, user registration is carried out to a catalogued file 22 at step 63. And a job file 30 is accumulated in partition 25a of the user applicable to the fingerprint information 19 at step 64.

[0036] It is easy to be natural even if it performs processing in which collate with the fingerprint information on the job file [ finishing / storing at a queue 25 ] 30,



will contain to the same partition 25a if the same, and the fingerprint information 19 on the job file which newly received will be contained to a new partition if there is no same thing although the fingerprint catalogued file 22 is formed and he is trying to collate the fingerprint information 19 by the printer 20 of this example.

[0037] The outline of the processing which prints to drawing 4 using a fingerprint authentication system in a printer 20 is shown. First, it judges whether the finger was put in step 71 by the fingerprint recognition system 23, and fingerprint information was acquired. If fingerprint information is not inputted, the printer 20 of this example is in a standby condition at step 72, and if the job file 30 in which fingerprint information is not included is received, it will print the print data at any time. On the other hand, if fingerprint information is acquired at step 71, it will judge whether it is fingerprint information [ finishing / registration to a catalogued file 22 ] at step 73.

[0038] In the case of the fingerprint information that it does not register, only when it judges whether processing when the fingerprint information that it does not register is inputted at step 77 is specified and processing is specified, the processing is performed at step 78. If processing is not specified, a print station 28 does not move and is not printed at all. The announcement of the purport which are not printing out the operation manual to a first time user as processing when the fingerprint information that it does not register is inputted, and a registered user may be outputted.

[0039] When the fingerprint information acquired from the fingerprint recognition system 23 at step 73 is a registered user, in step 74, the existence of the fingerprint with which plurality was registered as the same user is judged first. And when two or more fingerprints are registered into one user, it judges whether it is the fingerprint of which finger. When the directions which change into a catalogued file 22 the conditions printed [ number of sheets / paper size, a font, ] with a finger are registered, the conditions applicable to the fingerprint information acquired with the fingerprint recognition system 23 in step 75 are set up. And all the print data of the job file 30 accumulated in partition 25a of the user who corresponds at step 76 are printed.

[0040] If it is a simple printer, it will not be necessary to include processing like steps 74 and 75 which replaces with the finger made to recognize and performs conditioning. However, a fingerprint is the authentication information which it can have by one user, and about ten kinds of conditions can be easily set up only by changing the finger which performs fingerprint authentication. For example, if it decides beforehand as which document this finger will be used if it is a user dealing with various electronic forms and is set as the printer 20, it can print on a desired document only by changing the finger which the fingerprint authentication system 23 is made to read. Furthermore, probably the finger which specifies number of sheets, and the finger which starts printing will be decided, and a setup to which the number of sheets of only a count which made the finger which specifies number of sheets read is made to output will also be possible. Moreover, it is also possible to set up many conditions only for fingerprint information further by changing the pattern which makes two or more fingers read.

[0041] Thus, the printer 20 of this example is not printed unless, as for the information on a job file 30 that the fingerprint information 19 was added, the fingerprint information 19 is acquired with the fingerprint recognition system 23 of a printer 20. On the contrary, if the fingerprint information which is in agreement with the fingerprint information 19 included in the job file 30 is acquired from the fingerprint recognition system 23, the print data of a job file 30 will be printed immediately. With the fingerprint recognition system 23 of a printer 20, I hear that the user is touching the printer 20 and a user's fingerprint information is sometimes acquired, and if a user outputs the printed matter it was judged that needed authentication in the situation, the printed matter with which the user itself was outputted can be processed exactly. Therefore, even if it outputs the printed matter containing a user's individual humanity news or confidential information, it is satisfactory, and the safety of the information can be secured.

[0042] For this reason, the printer 20 of this example is a very suitable printer for the output of the information which needs such safety. Furthermore, since a user's authentication is performed by the fingerprint, unlike a password, it is not stolen or the user itself does not forget. therefore, user FUREN which is trustworthy, can output individual humanity news to insurance, and is further easy to use it -- it is a dolly printer.

[0043] The printer 20 of this example not only outputs confidential information, such as individual humanity news, but it can use it as a printer equipped with a personal data box or a personal mail box. By including the identification information of the user who becomes an addressee in the job file 30, a receive section 21 can store up a job file 30 in partition 25a assigned to the user. Under the present circumstances, if a user's fingerprint information which can be distributed to partition 25a assigned to the user is beforehand registered into the catalogued file 22, only when the fingerprint information of a transmitting person and an addressee agrees, a new function called the output or confidential printer of the telephone voice mail service mold with which an informational exchange is performed can be added.

[0044] Moreover, it is possible to give the function which acquires automatically the information on computer networks, such as the Internet connected to LAN2, to personal computer 10 or printer 20 self, and the information acquired by such function can be accumulated in a user's partition 25a. If a user puts a finger on the fingerprint authentication system 23 of a printer 20 with such a system, the information on the request accumulated in the queue 25 will be outputted automatically. Of course, there may be that information by e-mail and a user's partition 25a functions as a mail box in this case.

[0045] Furthermore, it is also possible to assign one or more of user partition 25a for [ by which specification such as a serviceman, was authorized ] the staff, and to register the staff's fingerprint. And if a finger is put on the fingerprint authentication system 23 when error information etc. is accumulated in the staff's partition 25a and a serviceman comes for routine inspection, it is also possible to make it a status sheet output automatically.

[0046] Moreover, the printer 20 of this example is trustworthy, and also as the application which deals with the individual humanity news which moves by a

personal computer 10 etc. to dedication, for example, a terminal of firm banking, since it is equipped with the authentication system with high safety, it is suitable. Since it outputs after recognizing fingerprint information even when printing the contents of a passbook, it can prevent certainly that the contents will be exhibited.

[0047] Thus, since the printer 20 of this example can direct the contents of an output using fingerprint information, it can be used for various applications as mentioned above as well as management of individual humanity news. Of course, the processing performed by the existence of fingerprint information explained above is instantiation, and it is also possible for it to be made to perform different processing. For example, when the job file to which fingerprint information is not added is received, printing of the job file which is not discriminable can attach the purport which is not performed, and can return it to a transmitting agency. Moreover, when the job file to which the fingerprint information which is not registered was added is received, it is also possible to cancel a job as what is not the directions from the user of this printer.

[0048] Moreover, although the example by which fingerprint information is included in the job file is explained above, it may be transmitted to a printer side by the file associated although it differed from the job file. However, it is the easy reasonable approach which including fingerprint information associates and makes a job file.

[0049] Furthermore, it is also possible to receive the job file to which it was added, the information, for example, the user number etc., of others which can identify a user etc., and to associate and carry out fingerprint information of a user number and its user using a user registration file etc. Also by such approach, a fingerprint can perform user authentication in a printer and processing which mentioned above can be performed. However, of course, it is desirable to perform user authentication for the same information as the personal computer which is a transmitting side.

[0050] Moreover, although the job file explains the system transmitted to a printer through a network by this example, you may make it memorize a job file to other suitable record media, for example, magnetic disk, or CD-ROMs etc. since fingerprint information turns into media or protection information on a file -- a user -- the storage which can be outputted only by him can be created.

[0051] In addition, although the printer driver explains in the condition of having been installed in the personal computer, above, a printer driver is recorded on a suitable record medium, for example, a floppy disk, and is recorded on a user. Of course, providing for a user through the Internet etc. is also possible.

[0052]

[Effect of the Invention] The airline printer of this invention has a means by which a fingerprint can be recognized, and enables it to print the information beforehand related with the fingerprint information acquired by it, as explained above. Therefore, it can print safely and certainly by associating and making information not opening to others into fingerprint information in relation to user individuals, such as individual humanity news. Furthermore, a personal output can be ensured, without preparing accessories, such as a personal output box.

[0053] Moreover, the airline printer of this invention can add various new functions which were mentioned above by utilizing fingerprint information as a user interface. Therefore, the airline printer which is still more convenient and is easy to use by this invention while extending the use range of an airline printer can be offered.

[Claim 1] The airline printer which reads a fingerprint and has a fingerprint recognition means by which each fingerprint can be recognized, and the printing means which can print the fingerprint information acquired from this fingerprint recognition means, and the information associated beforehand.

[Claim 2] The airline printer characterized by accumulating the job file equipped with print data in claim 1, having the file are recording means which can be supplied to said printing means, and said fingerprint information accompanying said job file.

[Claim 3] The airline printer characterized by including said fingerprint information in said job file in claim 2.

[Claim 4] It is the airline printer characterized by accumulating the job file equipped with print data in claim 1, having the file are recording means which can be supplied to said printing means, equipping said job file with identification information, relating the identification information with said fingerprint information further, and having a possible means.

[Claim 5] It is the airline printer which accumulates the job file equipped with print data in claim 1, has the file are recording means which can be supplied to said printing means, and is characterized by equipping this file are recording means with the partition beforehand related with said fingerprint information.

[Claim 6] It is the airline printer characterized by the information by which said printing means is not related with said fingerprint information printing the information related with said fingerprint information on different conditions by having an identifiable means for the existence of said fingerprint information related with information in claim 1.

[Claim 7] It is the airline printer which has the means which can be registered beforehand for said fingerprint information in claim 1, and is characterized by the ability of said printing means to print the information related with said fingerprint information which is not registered.

[Claim 8] The printer driver which reads a fingerprint, relates with the data for printing the fingerprint information acquired from the fingerprint recognition equipment which can recognize each fingerprint, carries out it, and has the output means in which an output is possible.

[Claim 9] It is the printer driver characterized by an output of the job file in which said output means included the data and said fingerprint information for said printing in claim 8 being possible.

[Claim 10] It is the printer driver which has a means for an output of the job file in which said output means contained the data for said printing in claim 8 to be possible, and to input said fingerprint information from said fingerprint recognition

equipment for every job file further.

[Claim 11] It is the printer driver characterized by an output of said effective fingerprint information in the job being possible with the job file in which said output means contained the data for said printing in claim 8.

[Claim 12] The printing system which has the means which can be transmitted to an airline printer from said information processor for an airline printer according to claim 1, the information processor equipped with the printer driver according to claim 8, and the data for printing related with said fingerprint information.

[Claim 13] The record medium characterized by what the data for printing and the fingerprint information acquired from the fingerprint recognition equipment which can recognize the read fingerprint are associated, and is recorded on the computer in the condition which can be read.

[Claim 14] The record medium characterized by recording the job file equipped with the data and said fingerprint information for said printing in claim 13.

[Claim 15] The control approach of an airline printer of having the process which is the control approach of an airline printer of reading a fingerprint and having the fingerprint recognizing ability which can recognize each fingerprint, and acquires fingerprint information according to said fingerprint recognition device, and the presswork which prints the fingerprint information and the information associated beforehand.

[Claim 16] The control approach of the airline printer characterized by accumulating the job file equipped with print data in claim 15, having the file are recording process which can be supplied to said presswork, and said fingerprint information accompanying said job file.

[Claim 17] The control approach of the airline printer characterized by including said fingerprint information in said job file in claim 16.

[Claim 18] It is the control approach of the airline printer which the job file equipped with print data was accumulated in claim 15, it had the file are recording process which can be supplied to said presswork, and said job file is equipped with identification information, and is characterized by having the process which relates the identification information with said fingerprint information, and carries out it further.

[Claim 19] The control approach of the airline printer characterized by accumulating the job file equipped with print data in claim 15, having the file are recording process which can be supplied to said printing means, and accumulating said job file in the partition beforehand related with said fingerprint information at this file are recording process.

[Claim 20] It is the control approach of the airline printer characterized by having an identifiable process for the existence of said fingerprint information related with information, and the information which is not related with said fingerprint information in said presswork printing the information related with said fingerprint information on different conditions in claim 15.

[Claim 21] It is the control approach of the airline printer which has the process that said fingerprint information can be registered, in claim 15, and is characterized by equipping said presswork with the process which prints the information related with said fingerprint information which is not registered.

[Claim 22] The control approach of an information processor of reading a fingerprint, relating with the data for printing the fingerprint information which is the control approach of an information processor of having the data origination function which creates the fingerprint recognizing ability which can recognize each fingerprint, and the data for printing, and was acquired by said fingerprint recognizing ability, carrying out it, and having the output process in which an output is possible.

[Claim 23] The control approach of the information processor which outputs a job file including the data and said fingerprint information for said printing at said output process in claim 22.

[Claim 24] It is the control approach of an information processor of having the process which an output of the job file in which said output process contained the data for said printing in claim 22 is possible, and inputs said fingerprint information from said fingerprint recognizing ability for every job file further.

[Claim 25] It is the control approach of the information processor in which an output of said effective fingerprint information in the job is possible in the job file in which said output process contained the data for said printing in claim 22.

[Claim 26] The record medium characterized by recording the driver program which can perform processing which reads a fingerprint, relates with the data for printing the fingerprint information acquired by the fingerprint recognizing ability which can recognize each fingerprint, carries out it, and is outputted to a computer in the condition in which read is possible.

[Claim 27] The record medium characterized by recording said driver program which outputs a job file including the data and said fingerprint information for said printing in claim 26 by said processing to output.

[Claim 28] The record medium characterized by recording said driver program which can perform processing which an output of the job file containing the data for said printing is possible, and inputs said fingerprint information from said fingerprint recognizing ability for every job file further in claim 26 by said processing to output.

[Claim 29] The record medium characterized by recording said driver program which can perform processing which outputs said effective fingerprint information in the job with the job file containing the data for said printing in claim 26 by said processing to output.